









## HOME NEWS

## Broker's economic survey forecasts dismal decade

BY CHRISTOPHER LORENZ

A FALL in real incomes of 4.5 per cent over the next 10 years, July would be caused by the 28 per week limit on wage increases, if no offsetting action were taken by the Government, says brokers Phillips and Drew in its Economic Forecasts.

It doubts, however, whether the labour force would accept such a fall and sees the Government coming under increasing pressure to reflate the economy. The pressure was likely to be irresistible because of rising unemployment, falling production and moderating inflation. So the Chancellor might react next spring by cutting indirect taxation, thus further reducing the over rate of inflation and preparing the way for the 1975-77 wage round.

Such action would limit the fall in real incomes to about 3 per cent over the next 10 years, according to Phillips and Drew, who claim their forecasting model to be similar to that of the Treasury.

In a review, the medium-term section of which paints a grim picture of the economy for most of the decade, Phillips & Drew are optimistic that retail price

rise will fall to 12-15 per cent by the end of next year, after having moderated to 15-16 per cent over the coming 12 months. They expect a rate of 26.1 per cent over the 12 months to this July to be reported officially on August 15, with a peak in August or September.

With real incomes under pressure, consumers' real spending was likely to contract a further 2 per cent by mid-1976. A modest upturn was expected late next year in the wake of the forecast reflationary action, but still to a background of depressed consumer spending.

Phillips & Drew sees nothing in the July White Paper to alter its view that a considerable recession in capital formation is to be expected, and it forecasts a 10 per cent fall in capital investment this year followed by one of 9 per cent next year.

Gross Domestic Product was seen contracting by an average 3.1 per cent in the next 12 months, with some recovery possible in the second half of 1976 as export volume and real consumption started to recover. But the weak demand pattern until then implied a continued

## Inflation could mean more home-owners — building societies

BY JOE RENNISON

MORE PEOPLE will be able to buy their own homes if the present trend of a decline in house prices compared with income levels continues, says the Building Societies Association in its quarterly bulletin Facts and Figures.

And, if inflation continues at its present rate, people buying a house now could be paying back a negligible amount on their mortgage out of their monthly incomes.

The bulletin says that the ratio of house prices to earnings in the second quarter of this year stood at 3.75. This compares with the historically high

a half times, the retail price index has not quite doubled.

The house price index is based on that for new houses. But the bulletin points out that the market is largely controlled by the prices gained for second-hand houses. Builders of new houses tend, therefore, to set their prices according to what is happening on the second-hand side.

Despite a healthy market at the bottom end of the price range the rises have not been sufficient to give confidence to the builders of new homes when compared with the increase of their own costs.

It is suggested that at present price levels many builders will feel that they are not getting a sufficient return to continue building new houses.

There is likely to be a further and brisk rise in house prices at the bottom end of the market. This will be caused largely by shortage.

At present there is very little "trading up" going on because of the general economic uncertainty and the increased cost of running a larger home. These people in smaller houses who might normally be expected to move out and make room for first-time buyers are staying put.

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figure of 4.52 in the second quarter of 1973 and 4.79 in the third — when the great house boom had reached its peak and was beginning to tail off.

But the ratio still remains high compared with the figure of 3.17 in the last quarter of 1970, the lowest recorded in recent years.

Because the ratio remains so high the BSA concludes that it is most unlikely that we will see a large rise in house prices in the near future.

## Return

"Now that people have seen that short-term upward movements in house prices cannot be extrapolated as infatuation such a pattern of house price movements is less likely to recur."

The bulletin is quick to point out the advantages of home ownership for those who have bought houses for less than £9,000. More than one third of the price of houses on average has gone up more than two and

## Reduced

The bulletin points out that the average man now would have to commit about one third of his gross salary but that if inflation continued at its present rate within 16 years this would be reduced to less than one per cent.

The activity at the lower end of the market is emphasised by tables giving the distribution of mortgages in the first quarter of this year. This shows that more than half of first-time buyers bought houses for less than £9,000. More than one third of first-time buyers were earning less than £3,000 a year.

## Publishers consider scheme for rival postal service

BY MICHAEL THOMPSON-NOEL

MOST PUBLISHING houses, alarmed at the prospect of further big increases in postal rates this autumn, are seriously examining plans to run their own, rival, independent postal service.

Mr. Patrick Tickell of the Publishers Association, claiming that the latest round of Post Office price proposals amount to "blatant discrimination against the printed word—books, magazines and periodicals," says that publishers are studying alternative methods of delivering their domestic mail and foreign orders.

"Home deliveries will not be too difficult to organise, especially within towns or between towns. That will leave the Post Office with remote villages, the Scottish Highlands and the Welsh valleys."

## Alarming

The situation is seen as equally alarming for overseas mail—publishers this year are expected to export more than £200m. worth of books and magazines.

By January 1 most overseas printed paper rates will have risen by 100 per cent, compared with pre-March 1975 levels, while the key Direct Agent's Bag rate for bulk exports will have risen by 166 per cent compared with rates before June last year.

Mr. Robin Fairlie, business services director of the Reader's Digest Association—believed to be the Post Office's biggest single customer—says that his company mails 50m. items a year, including 18m. copies of Reader's Digest, and may have to inaugurate its own, independent mail service, particularly in large concentrations.

At present the company has a five-year contract with the Post Office, which is due to expire next March.

"The lack of understanding by anyone in government about what the Post Office is about, or

how it should be used, is alarming," says Mr. Fairlie.

The Publishers Association itself has urged the Post Office Users' National Council to press for a full Government inquiry into how the Post Office is run.

Mr. Ronald Hobbs, managing director of the services division of the Longman Group, the Pearson Longman subsidiary, says that his company exports 20m. educational books a year and may consider greater use of air charter services instead of the Post Office—particularly for key markets such as Latin America and central Africa.

The U.K. book clubs have also been hit by steeply rising postal costs. Mr. Stanley Remington, general manager of Book Club Association, the biggest of the clubs with 500,000 customers, says an annual postal bill of around £15m. says the rises proposed for the autumn will lead to "massive" cost pressures.

"It will become absolutely impossible to recoup these higher charges from our customers. Our non-book postage alone will rise by at least £80,000 a year. We will have to look for alternative means of delivery."

The Publishers Association says that negotiations are now under way in most countries aimed at developing independent means of delivery.

According to Mr. Tickell: "This time last year, half a ton of publishing material, mainly books, was being shipped privately to Denmark; it is now more than 10 tons. The rate is 16p a kilo for deliveries within Copenhagen and 20p a kilo outside. These compare with official Post Office rates of 27p a kilo at present and the 38p a kilo planned for January 1."

The position in certain other foreign markets, says Mr. Tickell, is as follows:

Norway—20p a kilo via Oslo; Belgium—21p a kilo; West Germany—negotiation; Switzerland—a new scheme being introduced on Monday; Portugal—45 waiting lists.

tons of periodicals to Lisbon each week.

Greece—large quantities of magazines already going via a P and O road transport subsidiary; Australia—growing use of containerised freight; Malaysia, Hong Kong and Singapore—talks under way; the Middle East—negotiating a roll-off, roll-on facility via Tripoli.

## Evenly

The publishers say in a letter to Lord Piddie, chairman of the Post Office Users' National Council: "We believe strongly that the call for a full public inquiry into the sort of Post Office we want and the methods of financing it should be implemented before any further increases are sanctioned."

Failing that, say the publishers, the council should ensure that this autumn's postal increases are spread more evenly between the various weight bands, so as not to discriminate against the printed word.

The publishers point out that at present these proposals envisage price increases of up to 22 per cent in the first three weight bands, which mainly cover letter prices, but of up to 62 per cent in the weight steps that most affect magazines, journals and books.

## Students 'may turn squatter'

THOUSANDS OF students could be forced to turn squatter next month because of the worst-ever student housing crisis, National Union of Students' president Charles Clarke said yesterday.

The NUS was not specifically advising this action but it would back them as long as they moved into genuine unused property. It would not support anyone who landed a new scheme being introduced on Monday; Portugal—45 waiting lists.

## Gunmen cut down former UDR man

A 26-YEAR-OLD Protestant—a former member of the Ulster Defence Regiment—became the seventh person to die in Northern Ireland within 72 hours.

The man was gunned down in front of his wife by three masked men as he walked home in the village of Moy, Co. Tyrone.

Two of the gunmen ran off after the first burst of shots, but the third kept firing until the victim's wife grappled with him. He too ran off.

Two unsuccessful ambushes on security forces in western Ulster in the early hours of Sunday morning also gave strength to fears that a group of Republicans, perhaps unconnected with the Provisional IRA, are trying to launch a campaign in the area.

In an ambush at Stewartstown, Co. Tyrone, 30 shots were

## 'Education vouchers' suggested

By Michael Dixon, Education Correspondent

TRIALS with education vouchers, which parents would "cash" at schools of their choice, are being held up by the "naïve faith" of the Government in the education system, says evidence submitted by the Institute of Economic Affairs to the Layfield Committee on local government finance.

The evidence—the work of Mr. Alan Maynard, of York University—advocates a programme of experiments with different types of vouchers and names Kent as "at least one education authority" interested in conducting trials.

The teacher unions are charged with being resistant to change and accountability—and ignorant of the fact that a voucher system, by being weighted in favour of poorer families, could "be much more egalitarian than the present education system."

## 'Unofficial' Scotch exports up

BY KENNETH GOODING, INDUSTRIAL CORRESPONDENT

THE FAST development of the unofficial export market in Scotch whisky this year is clearly shown in statistics just released by the Customs and Excise.

The so-called "parallel" market developed because until the recent price increases in the home market Scotch bought ex-duty in the U.K. has been so much cheaper than in other parts of Europe.

The producers and their agents found the unofficial imports being sold in Continental markets at below the usual price and this had serious implications for the future promotion they could put behind brands.

The statistics show that, while exports in the first half of 1975 to the major markets were badly affected by economic gloom,

## Flourishing

Exports to France in the period at 1.8m. gallons worth £8.5m, were up 17.8 per cent in volume and 35.6 per cent in value. The Belgio-Luxembourg figures were up 24 per cent in volume to 1.2m. gallons and 51 per cent in value to just under £5m.

While the "parallel" markets were flourishing, export ship-

ments to Italy were falling after the Italian Government slapped on measures to restrict imports, including a 30 per cent VAT rate on Scotch. As a result, exports fell 49 per cent in volume to just over 1m. gallons and by 39 per cent in value to £5.2m.

Perhaps the most depressing news for the industry was that exports to the U.S., the biggest market in the world for Scotch, over the six months fell by 7.6 per cent in volume to 15.9m. gallons and by 8.49 per cent in value to £54.4m.

In the important Japanese market, exports were down 22.6 per cent in volume to 4m. gallons and by 5 per cent in value to £14m.

## Benn explains his remarks

FINANCIAL TIMES REPORTER

MR. ANTHONY Wedgwood Benn, Energy Secretary, has written to all the members of a Commons Committee emphasizing the main message he made on Wednesday about a contract under which ICI buys from the British Gas Corporation.

Mr. Wedgwood Benn had told Sub-committee B of the Select Committee on Nationalised Industries that British Gas lost £90m. last year under the 15-year fixed price contract signed in 1969, since ICI was paying only £20m. a year for supplies of gas for which the present price was £110m.

The Minister has now sent all members of the sub-committee a copy of his letter to its chairman, Mr. Edwin Wainwright. It reads:

"At the SCNI hearing on fuel tariffs on Wednesday morning I was asked about the long-term contracts entered into by the British Gas Corporation. In industry's own transmission reply I gave the information available to me and undertook to inquire further into the matter. marketing advantages.

## IN ITALY THE WORLD-WIDE FOOTWEAR MARKETS

## MILANO

6-9 SEPTEMBER 1975

Footwear - Tanneries  
Accessories - Modellers

For information:

MICAM  
1, Via Dogana,  
20123 MILANO (Italy).  
Tel. 02/2862-92770-804678

## BOLOGNA

6-9 MARCH 1976

Footwear - Tanneries  
Accessories - Leather  
Goods - Modellers

For information:

ENTE FIERE BOLOGNA  
4, Piazza della Costituzione,  
40128 BOLOGNA (Italy).  
Tel. (051) 503050

## U.K. trade with EEC only a third

BRITAIN conducts less of its overseas trade with Common Market countries than any other member of the EEC, according to the Treasury.

Only about one-third of Britain's trade is with the Community. No other member's proportion is less than 40 per cent, and some have considerably more.

The figures are given in an article on the pattern of EEC trade in the Treasury's latest economic progress report. The article says Britain is third in the Common Market league table of international trade after Germany and France.

Quoting statistics from the Organisation for Economic Co-operation and Development, the Treasury says Britain's export output "is less than half that of West Germany, considerably less than that of France and not considerably larger than that of the Netherlands."

## Electricity working with Marks &amp; Spencer

252 STORES IN NEW ENERGY MANAGEMENT PROGRAMME

## Sir Marcus sets the pace

Encouraging staff to be energy-minded: immediate measures to cut waste and over-consumption: top priority for energy management in future developments—these are key points in the new Marks & Spencer energy management programme inaugurated by the Chairman, Sir Marcus Sieff.

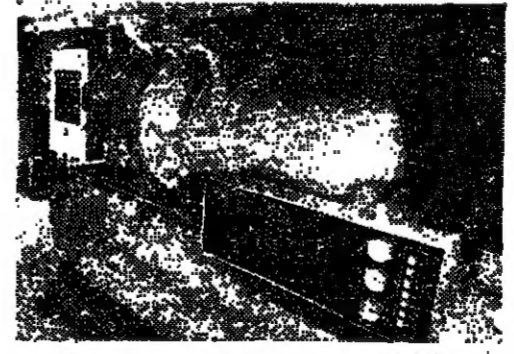


"It is vital to the nation that all sectors of the community develop the right mental attitude towards energy conservation," wrote Sir Marcus recently in The Times. To set the pace for his own company, he has established teams with responsibility for energy management in the 252 M & S stores and briefed the company's Building Group to improve energy efficiency in every possible way—while maintaining optimum comfort for staff and shoppers.

## Design for less heat loss

"Electricity accounts for the major part of our energy consumption," say M & S engineers, "and one of our most important aims is to conserve the heat produced by lighting, refrigeration and other applications. So we are widening our use of heat recovery and recirculation systems. Surplus

heat from refrigeration and sales floor lighting, for example, can be directed to backstage areas. We are also redesigning food display units to minimise 'spillage' of cold air, thus reducing refrigeration and space heating requirements.



"In stores with air conditioning, we are developing systems for closer control of the energy used for circulating air, and for pumping water in the ancillary equipment."

"And to keep our energy working for us, we're improving building insulation wherever possible. Better roofing, filling of wall cavities and double glazing, together with more discriminating use of thermostatic control, are all helping to cut heat waste."

## Looking at lighting efficiency

Here again, M & S policy is to increase efficiency without sacrificing standards. Good illumination is vital in sales areas—not only for attractive display, but also to ensure a strain-free



environment, and for safety on stairs and escalators. Throughout M & S stores and offices, the emphasis is on visual efficiency. New forms of mercury

halide and fluorescent lighting, both of which are 40 per cent more efficient than conventional fluorescent systems, are being introduced. With all forms of lighting continuous research is urged to achieve the highest standards of colour rendering in conjunction with these higher outputs.

## Energy effectiveness in new stores

With all new M & S stores incorporating systems for heating and cooling recirculation, high-efficiency lighting, and insulated structures, you might think these developments would satisfy the most energy-conscious management. "Yes, results are promising," say M & S. "But ours



is an on-going programme. Every installation sets a standard for improvement. We're testing different conservation methods all over the country. At M & S, full-scale energy management is now a fundamental part of our business."

For expert help on energy management in your own organisation, contact your Electricity Board. Benefits, costs, plans, equipment—they can advise you on them all.

Manage efficiently with Electricity



THE ELECTRICITY COUNCIL, ENGLAND &amp; WALES

# The Executive's World

EDITED BY JAMES ENSOR

David Fishlock on how ICL uses Pericles

## An education to the rest

ANY TIME Mr. Peter Ellis wants to know what value of computing equipment is awaiting despatch in ICL's three big factories in England, all he need do is to punch a few buttons on a TV-like apparatus in his office. Within moments the information appears on his screen. It's a question he asks pretty often these days, for two very good reasons. The obvious one is that his job is to keep the finished computers moving, and under a new inventory control scheme he is being charged interest on stock exceeding a certain level, at 1 1/2 per cent a month. The other is that his boss, Mr. Geoffrey Cross, who implemented the scheme, can ask the same question with equal facility of a similar apparatus in his own office, to find out just where his cash is tied up.

Mr. Cross and Mr. Ellis, respectively chief executive and director of worldwide marketing of ICL, are learning to live on terms of some intimacy with the computer. It's a new way of working, they are convinced, that a great many people in Britain are going to learn in the next few years. And it hasn't been easy: in fact they rejected the initial efforts of their ergonomists in Corporate Systems to bring man and machine into close relations.

The first attempt was a system tailored just for top management providing such information as financial reports. According to Ellis, it was "nothing more than a mechanical page turner." It simply wasn't possible to question the computer the way he does today, or to have any confidence in its figures.

As a salesman, he wanted not just a system that allowed him himself to work harmoniously with the computer, but one he knew he could sell to ICL's customers. If he got it right for ICL, he believed it would find ready markets among ICL's customers.

The root of the trouble was that the first system worked not on "live" data available at every level of management, and hence constantly updated and verified, but on data generated as a special and separate activity, which tended to be updated only in a crisis. And inevitably it was expensive, for it was an on-line system designed to serve only about five people.

It took another 10 man-years of systems engineering efforts to produce Pericles (Personalised ICL Engineering Service), whose name also owes something to the Athenian's reputation for integrity. (A classical scholar among ICL's ergonomists drew his colleagues' attention to Pericles' funeral oration: "In summary, I declare that our whole state is an education to the rest of Greece.")

Already some 30 ICL staff, from invoicing clerks to the chief executive, have access to the new data base, via about eight video display units (VDUs). Far from being frightened of an unfamiliar machine, they use them as readily as they use calculators, says Ellis. And top management began receiving exactly the same data as the shop floor.

Pericles is a service rather than a system: one that gives Cross and Ellis direct access to a number of on-line systems, such as an order file which he can access by order number, customer, site, etc., product allocation, and the debtor situation. Another ingenious system is "I spy" in which the computer will help frame the precise question required to elicit information the user is seeking.

So far the main beneficiary of the Pericles service is international marketing. Mr. Ellis's parish embraces some 8,000 people in 45 countries. He has direct links with the factories at West Gorton, Kidsgrove and Letchworth, and also with Paris, headquarters of ICL's operations in Europe.

The great advantage, he says, is how quickly people with a VDU get to the point of discussing what to do about a problem, rather than arguing whether a problem exists and how big it might be. Both parties to the discussion have the same data before them, and both have confidence in its integrity.

On this point Mr. Ellis stresses that he does not claim that the data base is infallible, but simply that it is constantly being monitored for error by many people of disparate interests. Moreover its users can back-track on any errors that might be uncovered, to find out who may have used the misinformation and put them straight.

An important reason, he believes, why Pericles works is that those who designed the system in Corporate Systems are under the same management as those who must use it. There can then be no question of anyone crying: "Who the hell dreamed up a system like this?" The onus for accuracy and completeness is put squarely on those who feed it with data.

"Unmatched sets are the absolute bane of this business," said Mr. Ellis, explaining why he needed Pericles so urgently. In his case the VDU sits on a trolley in a small annex adjoining his office overlooking the Thames at Putney, ready for instant interrogation. He reckons to have one or two intense sessions with it a week, sometimes attacking a problem of which he is already aware, to see what light the computer can shed, sometimes on the inventory situation to see just why it remains so high, and sometimes picking situations at random "and just see where it leads me."

When he asked for the inventory of System 2903 central processors, he received in moments a very detailed response, down to machines on test and being modified. The picture disclosed where each was being assembled, who it was for, when it would be finished and when its despatch was scheduled.

He spotted a German order, every component of which was apparently ready, yet which had been given no despatch date. A telephone call then produced the explanation that all was in fact well, but the despatch date had not yet been entered into the data base.

His intense interest in keeping completed machines moving is easily explained when it is said that since last October, when the new inventory control scheme came into force in earnest, about £220,000 interest has been charged against his division. But he is confident that with Pericles' help the total will be less than the interest amassed on the first, experimental year of the inventory control.

As far as the inventory goes, Pericles can give Peter Ellis the basic data he wants. There will be refinements—such as the facility automatically to ask the next obvious question once the data base has responded to the initial question—but each will have to be justified in terms of its cost-effectiveness.



Mr. Peter Ellis about to 'punch a few buttons'

John Trafford describes Bland Payne's move to Norwich

## On the Liverpool St. Line

BLAND PAYNE, the commercial and industrial insurance broker now controlled by the Midland Bank, decided in 1971 to move a large part of its operations from London. After a commendably brief period searching for a suitable spot, Norwich was chosen in 1972 and last month the company's chairman, Mr. Neil Mills, celebrated the end of the first phase of the move when he declared the new office block open.

It is too early to say whether the hopes of cost cutting and happier, more efficient staff are being realised. But whatever the long-term result, the company's finance director, Niven Duncan, has no doubts about the rightness of the decision. Given the time again, he says that the management would accept the turmoil and traumas of the move to secure the benefits it now enjoys.

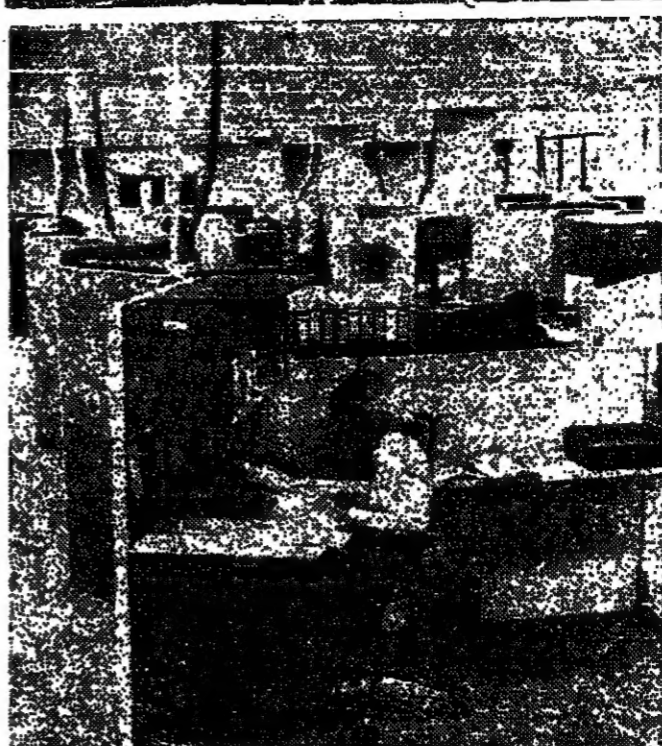
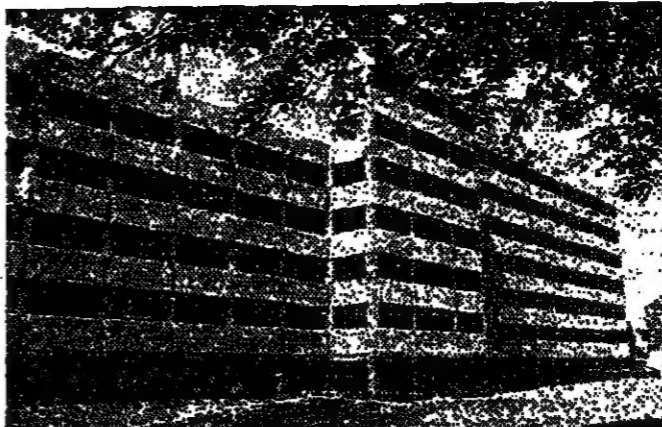
Although the financial benefits appear to be clear—"a substantial difference is bound to remain between London and Norwich in office costs"—Mr. Duncan sees the biggest advantages elsewhere. First, the move provided a necessary and salutary shake-up of ingrained habits. The fact that the company was moving from nine ill-assorted offices around the City of London to just two in the City and one large 102,000 square foot office in Norwich, 120 miles away was, he believes, the catalyst that led to two important operational decisions.

In the first place, the company decided that a really advanced telecommunications system was needed to obviate the disadvantages of distance. The most important aspect of that decision was the installation of the very advanced IBM 3730 switching system for both voice and data communication.

Without the move, the company would not have invested so promptly in such an expensive system. Having done so, it is one of only 20 British companies to operate the new IBM system and only the second in Europe to have two 3730s linked by a wide band circuit. Another result was the decision to equip the Norwich office and most of those in London with Cheiltenham and Norwich, the latter was chosen because of the easier access to the City via Liverpool Street station.

Negotiations with London and Overseas Property and Investment led to the decision in the spring of 1972 to move to an office block to be built specially for Bland Payne by the developers in Norwich. In September the first Bland Payne people, 38 members of the financial division, moved into temporary offices (a speculative office block also put up by London and Overseas) in the centre of Norwich.

There followed the only serious delay in the whole plan—the granting of a detailed planning permission on the proposed office block, for which outline planning permission had already been obtained. Eventu-



Bland Payne was able to give its Norwich girls almost twice the space of the Londoners

ally all was agreed and building work started in the spring of 1973. After completion last December, there ensued a six-month fitting out period.

Initially, Duncan explains, the company had intended to retain a small advance guard in the form of the finance division (numbering 180 including those recruited locally). It soon became apparent, however, that the company's recruiting and training facilities were going to be completely snowed under if the rest of the move to Norwich was delayed until the new building was almost ready for occupation.

Because Bland Payne has decided to rent rather than buy its office in the provinces, the economics of the move are not as clear cut as might be expected. The company was able to get a handsome price for one of its major City office blocks on which it had a long lease at a fixed (almost nominal) rental. The major items of capital expenditure have been the IBM switching system, the Action Office layout and air-conditioning in the Norwich office which the company opted for in the belief that it would be the norm in a few years time rather than

the exception which it is at present in Norwich. Since these items qualify for capital allowances, in effect only half their cost is born by the company. Even allowing for the cost of moving staff to Norwich and the granting of a £500 disturbance allowance, the net cost to the company has been below £500,000.

If the figures were reworked to-day, they would come out rather differently. It would not be possible to sell a City office leasehold as well as Bland Payne did at the height of the property boom, nor would it be possible to get a lease on an office block in Norwich at £1.30 a square foot with seven-year reviews. Without doubt, it requires luck as well as good management to extract the best economic performance from a relocation move.

Because the company had been paying some artificially low rents in the City, its savings on annual outgoings by moving staff to Norwich was relatively modest. Indeed if that were the only criterion for making the move, the switch to Norwich would probably not have taken place. The real key lies with the staff—their attitudes, their performance, their ambitions—and here the balance sheet is favourable if not wholly without blemish.

No-one who has moved to Norwich, says Duncan, appears interested in returning to London. They seem to like all those aspects of the working and leisure environment which the LOB spells out in detail in its brochures. Locally recruited clerical staff are of a generally higher quality than those available in London and, most important, staff turnover in Norwich is running at about 10 per cent, compared with a London figure of 30 per cent.

The problems, if problems they are, lie mainly in staff relations and promotion. It is very hard to convince people who work 120 miles away from one another that they all belong to the same company.

Another difficulty arises over promotion prospects. If the company wishes to promote, say, a 30-year old to a job in London, it will be difficult to give him any increase in living standards or even preserve his existing ones if he is moving from Norwich to London. This could prove a nasty snag because many of Bland Payne's brokers have come up through "the office." One possible answer, as Duncan sees it, is to move people abroad from Norwich and then at a later date back to London. As yet, the company appears more to have identified the problem than found an adequate solution.

But all in all Niven Duncan is an enthusiast for the move. "The trouble is that some say I must appear enthusiastic because I have been identified with the change," he admits—some people believe I wanted Norwich because I have a weekend cottage near Swaffham."

IBM's at this stage, which is fine for normal typing but not for editing.

Even if it can produce a fast and robust editing typewriter, it needs to decide whether to go for the cheaper, stand-alone systems which form the bulk of the market or whether to aim for the systems of the future, using shared logic, visual display units and other gadgetry.

A clue to that puzzle was given in the latest accounts for the year ended March 31, 1975. Explaining the merger last August of the Office and Machines Division with Sperry Univac (the computer side), the president of Univac, Mr. G. C. Probst commented, "In recent years, there have been parallel developments in computer and office machines technology and a gradual melding of the two markets."

Certainly the pooling of resources suggests a predilection for sophisticated systems linked to in-house computers. (IBM and Redacron already have typewriters that can be linked to computers through the telephone.) Not so, says Mr. Miller. "The real prospects are in power typing at the low end of the market. We could produce a stand-alone system for perhaps £2,500."

It is even conceivable that Sperry will produce machines at both ends of the market—with Remington which has a larger customer base selling at the lower end and Univac at the sophisticated end.

In Europe alone the annual sales value of the market is estimated by one independent source to grow from £33m. to £200m. by 1979. According to Mr. Miller, Sperry has up to 18 months to 'take some of that pie.' The Board's decision is expected in September.

### TYPEWRITERS

## Remington finds the going tough

BY ROY LEVINE

SPERRY RAND Corporation from January 1974 when it has ceased production of its family of four machines with the expressed aim of capturing a fifth of the U.K. market in "two or three years time."

Although there has been no run-down of the U.K. operation, there has been little expansion either and the aim now is merely to keep a presence in London in case the Board in Philadelphia decides to have another try.

Sperry's tentative withdrawal from the market represents a major victory for IBM which controls the predominant share of the markets in most countries. Any challenge to IBM, including Sperry's, has been thwarted by the fact that, until quite recently, there has been only one typewriter fast enough and rugged enough to form the nucleus of a system—the IBM Selectric.

"The cost of buying the typewriter from IBM at between £600-£700 each makes a word processing system very expensive. Also, being reliant on them means we lose a lot of flexibility," comments Mr. Miller, adding, "We must use our own single element typewriter for any new system we may decide to produce."

IBM's grip on the market was indicated earlier this year when Redacron Corporation, the second biggest in the U.S., produced a third quarter loss up to March 31 of almost \$1m. Mr. Anthony Mauro, Redacron's vice-president for marketing, partly blames IBM which delivered defective typewriters, thus causing a five-week delay in shipments.

Mr. Mauro will not say how much IBM paid in compensation in a private settlement. But in the meantime Redacron's fate service engineers—a far cry

looking around for a suitable entree into the market, made an agreed \$9m. bid for Redacron two weeks ago.

With new resources, Redacron will be giving more support to its distributors, especially in the important European market. A new range of machines will be launched world-wide next spring including its own electronic printer.

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Initially, the agreement worked well and started with Sperry buying over \$6m. worth of Redacron's machines which it sold under its own label. Both groups thrived until the economic recession came and with it the greater pressures on margins. It then became apparent that the weakness in the arrangement was the reliance on IBM's typewriter.

Sperry was selling a "Me-too" machine; no different to the other machines on the market and offering no price advantage. The extent of losses from its abortive venture may never be known, for the figures are not separated in the annual accounts.

The key to whether the Corporation has any future in the market is its typewriter. At the time of its U.K. launch it boasted it was "producing a new kind of machine that can go beyond the speeds of the Selectric and provide the same degree of flexibility and robustness." Yet the speed of its single element typewriter, at 151 characters per second, is only marginally faster than

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IBM's at this stage, which is fine for normal typing but not for editing.

Even if it can produce a fast and robust editing typewriter, it needs to decide whether to go for the cheaper, stand-alone systems which form the bulk of the market or whether to aim for the systems of the future, using shared logic, visual display units and other gadgetry.

A clue to that puzzle was given in the latest accounts for the year ended March 31, 1975. Explaining the merger last August of the Office and Machines Division with Sperry Univac (the computer side), the president of Univac, Mr. G. C. Probst commented, "In recent years, there have been parallel developments in computer and office machines technology and a gradual melding of the two markets."

Certainly the pooling of resources suggests a predilection for sophisticated systems linked to in-house computers. (IBM and Redacron already have typewriters that can be linked to computers through the telephone.) Not so, says Mr. Miller. "The real prospects are in power typing at the low end of the market. We could produce a stand-alone system for perhaps £2,500."

It is even conceivable that Sperry will produce machines at both ends of the market—with Remington which has a larger customer base selling at the lower end and Univac at the sophisticated end.

In Europe alone the annual sales value of the market is estimated by one independent source to grow from £33m. to £200m. by 1979. According to Mr. Miller, Sperry has up to 18 months to 'take some of that pie.' The Board's decision is expected in September.

This announcement appears as a matter of record only

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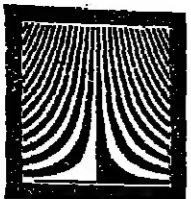
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# The Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOTERS

## METALWORKING

### Spray forging saves energy

PATENTS have been secured on a new process which provides a novel approach to the production of forged components, saving both considerable amounts of energy and of time, as well as raw materials.

Osprey Metals, Neath, Glamorgan, and BOC have concluded a joint agreement to develop and market the spray forging process. This is applicable to a range of alloys which includes non-ferrous, ferrous and the "super-alloys."

In the process, melted scrap is atomised with the aid of high pressure jets of inert gas. These help to direct the resulting spray of metal droplets into a shaped mould to make a high density preform for forging.

The whole process takes only seconds to convert molten steel, for instance, into the finished product. Conventional processes take considerably longer and, in addition, cannot accept scrap materials directly as a feedstock,

having to rely on raw materials that have been part-processed, usually outside the user's plant.

Osprey and BOC claim that cost savings of some 50 per cent can be shown over conventional methods of making forgings from the stock or powder.

#### Properties

Pilot plant is operating at Neath and tests on initial products have shown that they have properties comparable with drop forgings in the same materials.

The protagonists of the process, which has been called "Osprey," say there is no reason why it should not be applied to the most difficult high-stress alloys.

Dr. Gwyn Brooks of Osprey Metals told the Financial Times that so far as he could see there was no limitation on the mould shape that could be successfully

sprayed. Fairly complicated designs, such as bevel gears, had already been made with success and there was no reason why such things as turbine blades, normally difficult to forge because of the materials used, should not be made with Osprey techniques. He stressed that the company had not yet done this, but was game to try any mould or preform mould submitted with a great deal of confidence as to the outcome.

Savings of 50 per cent, mentioned above, could mean a significant export advantage to the U.K. forging industry whose output is around the 600,000 tons per year mark.

BOC, Metallurgical Processes Department, 15/17, Northgate, Baldon, Shipley, Yorks, BD17 6JZ, Bradford (0274) 596527. Osprey Metals, Red Jacket Works, Millands Road, Neath, Glam., SA11 1NJ. Neath (0639) 3643.

## ELECTRONICS

### Will test any board

ACCORDING TO Applied Digital Devices the best kind of "in-depth" testing is carried out by skilled engineers and the best way to make such people is to hire them on a job-by-job basis.

The alternatives are to buy the appropriate automatic test equipment at high capital cost, or buy in skilled test personnel, again at high cost and suitably equip them.

Applied Digital is therefore offering a service which it says removes the entire test problem from the shoulders of the production managers. It is already handling the complete test requirements of one or two very large PCB assembly producers, to military and commercial standards.

The company says that customers are saving money by shipping PCBs to Applied Digital's Welwyn Garden City laboratories and collecting them after testing; and since operations are at a skilled level, faults can be identified and rectified at the same time.

## COMPONENTS

### Compressor is compact and quiet

A LINEAR compressor has been introduced by Tex Abrasives, Greenstead Road, Colchester, Essex (0206 4971) which is claimed to be light, simple, safe, quiet and economical.

Alternating current is half-wave rectified and applied to a fixed electromagnetic creating an intermittent magnetic field. The resulting motion of an associated piston is obtained by alternating magnetic attraction and the reaction of a coil spring.

With a 50 Hz supply, 3000 strokes/minute are obtained. Measurement of the unit are only 184 x 120 x 115 mm and the weight 3.2 kg. Since there are few parts, maintenance is infrequent and moving components are Teflon-coated, making lubrication unnecessary.

Maximum air pressure available is 8 psi with delivery of 0.85 to 1.1 cubic ft./min. Liquid rate of flow is one gallon/min. (4.5 litres/min.). The piston stroke speed is 13mm and consumption of the mains 40 W maximum.

Performance of these transformers is comparable with defence specifications. R. A. Webber, Knappes Lane, Clay Hill, Bristol BS5 7UJ, Bristol 957228.

## DATA PROCESSING

### Worldwide systems analysis

AFTER THREE years of existence, much of it simply concerned with getting research projects agreed, staffed and started, the International Institute for Applied Systems Analysis at Schloss Laxenburg near Vienna is beginning to get its stride.

The Institute, as yet hardly known in Britain, though the U.K. is one of the countries involved was set up as the result of a joint American-Russian initiative between them they still pay two-thirds of the annual running expenses—and now has all told fourteen member countries.

Officially, membership is non-governmental. In practice, the membership is usually organised by the national academy of sciences that the research has the approval of the countries concerned and is funded by them, though at one remove through

their member organisation. IIAA was set up to research into characteristics and control of large-scale computing systems. The problems have to be of an international nature. Either they must be global, to that solutions would require the co-operation of many nations (pollution, water resources for instance), or they are universal in that countries face similar problems—urban and regional development, energy systems and the like.

#### Progress

So far, most progress seems to have been made on the second front, though it is, of course, as yet too early to talk in terms of solutions for the Institute has not been in serious working existence for more than 18 months.

IIASA's strengths are becoming evident, particularly in two areas in which the necessity for joint international research has long been apparent. The first is concerned with the management of large development projects.

It is mounting three large retrospective case studies of comprehensive regional development projects. The Tennessee

Valley Authority in the U.S. has already been researched. The Bratsk-Dim program, a large-scale, 15-year-old comprehensive regional development plan in Siberia, is to be researched, including visits by a multinational team this autumn. The team will be looking at the Russian experience in the planning and development of power generation, water control, transport, land utilisation, industries, agriculture, etc. It is the first time that the Soviet Union has allowed outsiders to look at its management of a major development project in any depth, and much is expected from this.

The third case study is expected to be carried out in Iran. The work is being done under a UNEP contract, and should result in concrete conclusions which would be of help to third world countries.

The TVA and Bratsk Dim Project studies should provide guidelines which can be applied in the third case study, also likely to be treated as a pilot project. The main interest lies in the comprehensive planning and effective management of such projects. Any conclusions would be of considerable interest

to other governments. The second area causing much interest is the IIAA study of integrated industrial systems. The first major research project in this area has been concerned with the steel industry, reviewing integrated systems, control, the broad spectrum of decision making and control functions (process control, operations control, scheduling, planning, etc.) on an international basis. Nearly 30 plants in 11 countries plus a number of other institutions have been visited.

Conclusions are expected to be published later this year, but the draft report points out that the only fully integrated systems at the works level are to be found in Japan.

## HANDLING

### Cuts costs in the mailroom

NEW desk-top paper handling equipment is being marketed in the U.K. by Ronco-Neopost mailroom division of the Ronco Vickers Group. It can reduce mailroom overheads by as much as 80 per cent, through modular construction and adaptability for virtually any paper handling task, speed of operation. It requires one operator.

F10 System Five is manufactured in Holland by the Group's subsidiary Hadewe B V and comprises a F10 folder-inserter, which can be electronically linked to a series of machines for feeding standard sized material, computer print-outs, cross-folding, nesting an insert, on-line postal franking and stacking.

The largest combination is of four machines which provide for folding a document, cross-folding, counting, inserting and sealing into envelopes, franking and stacking in one sequence and needing one operator. Speed is up to 3,500 folded envelopes an hour.

Cost of a basic inserter installation is from £1,750 and the equipment is available on lease. Main markets are for account-

ing and invoicing procedures in small to medium sized companies processing between 2,000 and 20,000 documents per month. Ronco-Neopost, 74 Upper Richmond Road, Putney SW15 2SZ. (01-874 0404.)

## POWER

### Inverter is robust

MANUFACTURE has started at Avel-Lindberg of a 500 VA regulated static sine-wave inverter designed to operate under the adverse environmental conditions frequently encountered in airborne, airborne and land mobile applications, including vibration, shock, salt spray, humidity and heat.

Models for 50 and 60 Hz are available and taps on the output transformers provide output at 24, 48, 110, or 230 V dc in five-volt increments.

The nominal input voltages are 24, 48, 110, or 230 V dc in the 50 Hz version and can change between 85 and 120 per cent of nominal without altering the output by more than 2.5 per cent, while loads up to 500 W are applied. Distortion of the sine wave output is about 7 per cent, frequency stability ±0.5 per cent.

Designated MP4, the unit employs a saturated toroidal transformer resulting in very

### Guaranteed against defects

FIVE YEARS' guarantee is offered on new "Polyweb" multi-purpose transformers available from R. A. Webber.

The windings of the transformers are vacuum encapsulated in polyester resin and the complete units protected by drip-proof cases, offering flying leads, protected terminals or conduit entry in one enclosure. Inter winding insulation is of the order of 100,000 megohms, withstanding BS3535, 4000 volt AC winding-screen-winding test at five times working voltage.

The filter used with the resin has high conductivity giving efficient heat dissipation from core and windings. It also renders the transformer fire-proof.

Performance of these transformers is comparable with defence specifications. R. A. Webber, Knappes Lane, Clay Hill, Bristol BS5 7UJ, Bristol 957228.

## PROCESSES

### Continuous sieving

CONSTANT introductions of improved techniques in the food and chemical process industries create a demand for continuous operating sieving machines of ever larger capacity.

Twin Turbo Finex is a compact machine designed for this purpose using operational components of two Russell Finex units.

The machine is fabricated from heavy gauge stainless steel and incorporates sanitary design, which includes the provision of a large inspection door to facilitate the rapid removal of all internal components for sterilisation.

The body is so constructed that corners are radiused, welded joints being formed away from these points, where they can be ground flush to avoid the creation of crevices and thus meet the strictest hygienic standards. Ample floor clearance is provided to accommodate the high volume throughput of the twin sieving assemblies.

Each assembly consists of a readily removable sieve cage, supporting the desired metal or textile sieve sleeve, inside of which is the rotating impeller.

Each shaft is driven indirectly from a 3-hp motor through a toothed timing belt, providing the facility of choice of impeller speed to meet the sieving characteristics of the material being handled. A further advan-

tage of this design is the provision for operation at full or half capacity, as required.

Facilities for testing the Twin Turbo Finex model are available at Russell Finex, Russell House, Adam Street, London W.C.2 (01-636 0655).

## PACKAGING

### Inspecting roll packs

INTENDED FOR use on a line immediately after roll-wrapping machinery is an inspection unit able to deal with 200 packs a minute. Made by Auto Wrappers (Norwich), it is particularly suitable for circular roll packs containing tablets, chocolate pieces, boiled sweets and similar items.

Six operations are performed. First, the roll end folds are pressed to ensure correct detection in the ensuing operations. A check is then made for short packs by means of a plunger travel. If more travel is detected than normal a signal is sent to the machine's memory unit.

Foil sensors check each end of the pack in the next operation, the tablet is notched if the foil is missing. The fourth section looks for misplaced or missing labels using a photo-cell and reflection principle, and a fifth, also using a photo-cell, detects whether a complete pack is missing.

The sixth and final system rejects faulty rolls using a solenoid actuated by the memory unit. The complete unit is at Drayton Industrial Estate, Norwich (0603 49231).

## OFFICE EQUIPMENT

### Rotating the work

ROTOBOARD of Bridgnorth has effectively applied some lateral thinking to the problem of draughting, more accurate draughting. The RotoBoard, for architects, engineers or designers, consists of a circular rotating drawing table incorporating the original notepad and the drawing itself should move around the drawing instrument instead of vice versa.

It not only works but offers the draughtsman a number of other advantages. The board is only available in A3 size (working area 297 x 420 mm., 11.69 x 16.54 inches) and incorporates a sliding horizontal and vertical unit. The latter allows parallel rules to be drawn at predetermined intervals from 0.1 mm. upwards by simply dialling the space interval required thus avoiding the need to mark-out work first.

The rotating table moves freely, may be locked in any position or clicked into the common angles, 0, 30, 45, 60 or 90 degrees. Because the drawing itself rotates, set squares are not necessary and lines do not have to be drawn in the shadow of the drawing instrument, traditionally a common source of error.

Another practical feature is that degrees of the circle are calibrated on the perimeter of the table so that angled lines may be drawn from the outside towards the centre, further reducing risk of errors.

The RotoBoard weighs about 11½ lbs, is portable, will perch firmly on any square-edged table and comes in a PVC carrying case, overall dimensions approximately 27 inches by 22 inches.

The manufacturers claim very high degrees of accuracy, draughting the board has won COID approval. RotoBoard, Stanmore Industrial Estates, Bridgnorth, Shropshire, WV15 5HP, say it will be glad to demonstrate its board in your office.

## HEATING

### Warms pipes in danger zones

ELECTRIC HEATING tape suitable for application to pipe-work in Zone One explosive atmospheres can now be supplied by Isopad, Basset Bygate, Bournemouth, Dorset BH2 9AF. (01-983 6274).

Designated FTW/SS, the tape is the basis of BASFEEFA test report 2/75 which states Isopad is confirmed by the Factory Inspectorate as having the same safety as validated in view of the fact that no British Standard exists for trace heating equipment.

The tape, which offers an alternative to the traditional method of sheathed mineral insulated element, provides strength and flexibility, as well as ease of installation and is available from stock.

# CONTRACTS AND TENDERS

## NOTICE No. (245)

### NATIONAL DEVELOPING PLAN PROJECTS MINISTRY OF MUNICIPALITIES—IRAQ THE SEWERAGE BOARD

#### TENDER FOR

CONSTRUCTION OF NAJAF-KUFA SEWERAGE SCHEME/STAGE 1  
CONTRACT No. 1—CIVIL WORKS FOR THE TREATMENT PLANT & PUMP STATIONS  
SUB-CONTRACT No. 1/M—MECHANICAL & ELECTRICAL INSTALLATIONS FOR THE TREATMENT PLANT & PUMP STATIONS

#### CONTRACT No. 2—SANITARY SEWERS NETWORK

The Sewerage Board invites the experienced tenderers to participate in tendering for the above mentioned contracts and sub-contract for any one of them. A brief description of the works included in the two contracts and sub-contract is summarized below—

##### 1) CONTRACT No. 1

Civil Engineering Works for the construction of two area sewage pumping stations (One at Najaf and the other at Kufa city) and a Sewage Treatment Plant serving 220,000 population equivalent and consisting of settling tanks, pumping stations, sludge digestion tanks, biological filters, sludge drying beds, chlorination building, administration and control building together with the ancillary works such as pipework, channels, roads, fences, etc.

##### 2) SUB-CONTRACT No. 1/M

Supply and erection of all electrical and mechanical equipment for the two area Sewage Pumping Stations and for the Sewage Treatment Plant described above.

##### 3) CONTRACT No. 2

Construction of approximately 185 Kilometres of pipe sewers ranging in diameter from 200 to 1,000 mm. together with the construction of manholes, house connection laterals and other ancillary works to the network.

Fuller and more precise details of the works are given in the Contract Documents. Two sets of the Tender Documents plus one set of the Drawings can be obtained from the SEWERAGE BOARD'S office in Baghdad against payment of ID. 50/- (fifty Iraqi Dinars) refundable for each of the two Contracts and the Sub-Contract.

Tenders must be accompanied by a preliminary deposit either in cash or certified cheque or by a bank guarantee issued by one of the Government banks in Iraq valid for a period of not less than six months from the tender closing date and of the sums as follows:—

- a) ID. 30,000/- For Contract No. 1
- b) ID. 7,500/- For Sub-Contract No. 1/M
- c) ID. 50,000/- For Contract No. 2

Iraqi tenderers should be members of the Chamber of Commerce, bearing Income Tax certificate for this year and classified according to the Planning Board's instructions as follows:—

- a) 2nd Class Contractors for Contract No. 1
- b) 3rd Class Contractors for Sub-Contract No. 1/M
- c) 1st Class Contractors for Contract No. 2

The preliminary deposits together with other certificates and documents as required above and as specified in the "Instructions to Tenderers" of the Contract Documents should be contained in a separate envelope and enclosed together with the Tender, clearly written on the outside the name and number of the Tender and deposited in the Tender Box at the Ministry of Municipalities in Baghdad before 12.00 noon on Wednesday, October 1st, 1975.

N. Alani  
D.G. & Chairman  
of the Board of Directors  
Dr. Najmaddin Abdul Latif

## NOTICE No. (246)

### NATIONAL DEVELOPING PLAN PROJECTS MINISTRY OF MUNICIPALITIES—IRAQ THE SEWERAGE BOARD—BAGHDAD

#### TENDER FOR

CONSTRUCTION OF WEST BANK TRUNK SEWER FOR BAGHDAD SEWERAGE SCHEME  
(CONTRACT 207)

The Sewerage Board invites the experienced tenderers to participate in tendering for the above mentioned contract. A brief description of the works comprised in the Contract is as follows:—

- a) 1st section—the construction of approximately 4.15 kms of 30 metres diameter Trunk Sewer of cast in-situ reinforced concrete having a wall thickness of 45 cms, and the construction of short lengths of subsidiary sewers connections ranging in diameter between 450 to 1000 mm.
- b) 2nd section—the construction of approximately 3.80 kms of 30 metres diameter Trunk Sewer of cast in-situ reinforced concrete having a wall thickness of 35 cms and the construction of short lengths of subsidiary sewers connections ranging in diameter between 450 to 1000 mm.
- c) The construction of manholes on the abovementioned sewers.
- d) The lining internally of the trunk sewer and associated manholes with anti-corrosion protective materials.

An alternative Design and method of construction can be offered by the tenderer provided it is approved by International consultants. Tenderers may submit their offer for either section or for the whole length of Trunk Sewer.

Iraqi tenderers should be members of the Chamber of Commerce, bearing Income Tax certificates for this year and classified as first class contractors according to the Planning Board's classification.

Tenders must be accompanied by preliminary deposit either in cash, certified cheque or by a bank guarantee of the sum ID. 40,000/- (Forty thousand Dinars) for any section of the contract or ID. 80,000/- (Eighty thousand Dinars) for the whole contract and valid for a period of not less than six months from the closing date of the Tender.

The complete set of the Tender Documents can be obtained from the Sewerage Board's office in Baghdad against payment of ID. 50/- (fifty Iraqi Dinars) which sum is refundable. The preliminary deposit together with other certificates and documents as required above and as specified in the "Instructions to Tenderers" of the Contract Documents should be contained in a separate envelope and enclosed together with the Tender and deposited in the Tender Box at the Ministry of Municipalities before 12.00 noon on Wednesday, September 3rd, 1975.

N. Alani  
D.G. & Chairman  
of the Board of Directors  
Dr. Najmaddin Abdul Latif

## 330 KV TRANSMISSION SYSTEMS

### SUBSTATIONS

Applications to tender are invited for the manufacture, supply, delivery, erection and commissioning including civil work on a turn-key basis of:

#### LOT 4:

Three (3) substations 330/132/13.8 KV. at Ikeja-West, near Lagos, Kano and Ibadan.

The construction will be financed by National Electric Power Authority (NEPA), Lagos, Nigeria. Payments will be made in the currencies quoted by the bidders. Expenses incurred in Nigeria will be paid in Nigerian currency (naira), only. Applicants must submit evidence of their legal and financial status and a detailed description of previous experience in work of similar value and scope. Their evidence will be considered as prequalification documents.

The required completion time for the project is very short and requires a special effort in manufacture, erection and commissioning to keep to the schedule. Tender documents for substations will be available on 8th October 1975 and may be obtained through a written application accompanied by a cheque for the non-refundable charge of Swiss Franc 500 to the consultants:

Motor-Columbus  
Consulting Engineers Inc.

Parkstrasse 27,  
5401 Baden/Switzerland.

Telex No. 54 532 Moco Ch.  
Phone 066 22 94 21.

A copy of the application should be addressed to the National Electric Power Authority. The tender closing date is 21st January, 1976.

A. G. McKEE & CO.  
on behalf of  
YACIMIENTOS PETROLIFEROS  
RISCALES BOLIVIANOS

INTERNATIONAL PUBLIC  
LICITATION NO. 3

PURPOSE: Supply of mixers for a refinery at Cochabamba, Republic of Bolivia.

OPENING OF BIDS: On October 7, 1975 at the below-mentioned offices, at 11:00 a.m. The bids will be received until that date and time.

INTERNATIONAL PUBLIC  
LICITATION NO. 4

PURPOSE: Supply of propane refrigeration unit for a refinery at Cochabamba, Republic of Bolivia.

OPENING OF BIDS: On October 8, 1975 at the below-mentioned offices, at 11:00 a.m. The bids will be received until that date and time.

BID BOND: 5% of the amount of the bid.

INQUIRIES AND DOCUMENTATION: Inquiries may be made and specifications and bidding conditions may be secured at the office of "A. G. McKEE & CO.", Hipolito Yrigoyen 440, 8th floor, Buenos Aires, Argentina.

PRICE OF SPECIFICATIONS AND BIDDING CONDITIONS: U.S. \$50.00 or its equivalent.

VALIDITY OF OFFERING: Thirty days following bid opening date.

FINANCING: BY THE BANCO INTERAMERICANO DE DESARROLLO (INTERAMERICAN DEVELOPMENT BANK), in accordance with Contract No. 225/OC-80 with the Government of the Republic of Bolivia.

INTERNATIONAL  
TENDER NOTICE  
FOR PURCHASING 36 ITEMS  
GARAGE AND WORKSHOP  
EQUIPMENT

1. SHERKAT VAHED AUTO BUS RANI TEHRAN VA HUMEH (UNITED BUS COMPANY) intends to purchase through international tender 36 items of garage and workshop equipment under the Loan Terms and Conditions of the International Bank for Reconstruction and Development (World Bank).

2. The subject equipment and accessories should be in accordance with the specifications which are the integral part of the tender documents and which will be available, free of charge, to the bidders.

3. The local bidders may obtain, free of charge, technical specifications and tender terms and conditions every day except holidays until September 30, 1975 during office hours from the Tender Documents (Model) at the office of the United Bus Company Headquarters in Narmak.

4. The foreign bidders (Member of the BIRD as well as the Swiss Bidders) may obtain the technical specifications and the tender terms and conditions from the respective Imperial Iranian Embassies until September 30, 1975.

5. The interested local or foreign bidders have to submit Secretariat Department of SHERKAT VAHED their offers contained in the sealed and signed envelopes latest until the end of office hour on September 30, 1975.

6. The Tender Meeting will be held at 10 a.m. on October 1, 1975 and will study the offers and answer the questions of the bidders.

7. The bidders should submit enclosed to their offers, a bank letter of guarantee equal to 5% (five per cent) of the total value of their offers, refundable and issued by an authorized bank.

8. The offers being considered, without bank guarantee or those received after the due date will not be considered.

9. The representatives of the bidders are free to attend the Tender Meeting.

10. SHERKAT VAHED reserves the right to accept or reject the offers.

SHERKAT VAHED AUTO BUS RANI TEHRAN VA HUMEH

## PLANT & MACHINERY SALES

Description	Price	Telephone
Reconditioned Modern Rolling Mills, Wire Drawing Presses, Slitting, Leveling, Cut-to-Length Equipment, Furnace and extrusion facilities.	P.O.A.	021-556 0904
Wanted Used Storage Tanks surplus to requirements N.C. Flexowriters for Punching N.C. Programme Tapes—Refurbish with 2 year Guarantee—Save up to 50%.	P.O.A.	0742-26422
Fork Lifts Fully Renewed, large selection, 6 months warranty 1973 Newall SA Cylindrical Grinders—High Speed: 12" x 36" Angle Head, Flange up to 10" wide with copy. Completely equipped.	P.O.A.	Dudley (0394) 57453
Rubber Processing Plant, Mills, Calenders, etc. Bigwood 16" x 0.049". Cut to length and Forming Line	P.O.A.	01-572 3451
IF YOU HAVE PLANT AND MACHINERY SURPLUS TO YOUR REQUIREMENTS, AND WOULD LIKE TO ADVERTISE IN THIS COLUMN, PLEASE TELEPHONE MR. FRANCIS PHILLIPS ON 01-235 0105.	From £15,000	02092-435

# Building and Civil Engineering

## Hospital job for Higgs and Hill

HIGGS and Hill Building has been awarded a contract, valued at £4.7m, for the construction of phase five of the Southlands Hospital, Shoreham-by-Sea, Sussex. This is a joint development by the Department of Health and Social Services and the South West Thames Regional Health Authority.

The company says this is one of the first hospital projects to use the Higgs method, one of the current systems designed to rationalise and speed up hospital planning and construction. The Southlands Hospital scheme is intended to develop and evaluate structural and cladding options for the system.

Two different structures are being used; the wards follow the standard Higgs cruciform layout, having a ribbed short-span in-situ concrete frame while the services block will be a long-span structure using precast-concrete trusses spanning 15 metres, with an in-situ concrete slab. Both structures will be clad with faced brickwork and will have precast concrete all units.

The architects are the Hospital Design Partnership.

In the north, Higgs and Hill has been awarded the contract for the construction of an office block at Lands Lane, Leeds, for the Bradford and Bingley Building Society. The architects are John Bruton and Partners.

## New way to crush materials

COMPRESSION testing machines with improved operational features are being manufactured and supplied by the research and development division of Head Wrightson at Thornaby-on-Tees, Cleveland. These machines will be of interest to companies who manufacture or use agglomerates or granular materials, especially when it comes to testing concrete cubes.

Previous models have been used extensively by the iron and steel industries throughout the world in the development and quality control of green and fired iron ore pellets, but many other compounds associated with the chemical, mineral and foodstuffs industries can be accurately tested for compression strength.

The machines are supplied in two basic capacities, 50 kg and 1,000 kg, suitable for use in laboratories or process plants. The 50 kg unit is primarily intended for low-strength pelleted materials, where compression strength and deformation characteristics are of interest.

The 1,000 kg unit is designed to determine the maximum compression characteristics of higher strength materials and incorporates a two-speed mechanism to facilitate the high-speed processing and analysis of test samples. Both machines are supplied with associated instrumentation to record deformation and fracture characteristics.

Further details from the company at Yarm, Cleveland, TS15 8DA, Eaglescliffe 781010.

## Conversion of kiln by BOC

FUEL GAS and engineering service department at British Oxygen has completed a second large-scale conversion of a vertical shaft lime kiln to natural gas firing, using a central lance burner.

Both kilns produce 100 tons per day and are owned by Singleton Birch, Melton Ross Quarries, Barnetby.

Improved quality, low sulphur levels and appreciable savings in fuel costs are reported compared with solid fuel firing, together with a much appreciated reduction in air pollution.

Developed in Germany by Stoll Research, the process introduces gas and air through a central lance burner so that

## Happy with more by Agreement

NATIONAL Cavity Insulation Council's fight to maintain high standards of cavity wall insulation, by furthering the adoption of the standards of practice laid down by the Agreement Board, has now been completely endorsed by a major improvement in the Agreement Board's system of approval of installers, NCIC has declared.

The improvements mean that installation companies working as approved or licensed installers of the Agreement Board will now come under exactly the same careful examination and rigid scrutiny as that certificate holder.

Until now the NCIC has felt that Agreement approval of a product alone meant very little, as the system gave the manufacturer of the product the responsibility for ensuring his licensed installers were carrying out work to conditions laid down by the Agreement Board. It was felt that this did not provide an adequate measure of control and that commercial pressures could lead to malpractice.

NCIC was formed with the express intention of establishing and maintaining recognised and uniform standards of practice and conduct in the cavity wall insulation industry, as they believe that an approved installation process provides the best measure of protection to the consumer. The standardisation of all installation contractors by the Agreement Board has gone a long way to providing this protection, NCIC states.

Membership of the NCIC has been restricted to installation

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## Services in shopping centre

HADEN YOUNG, member of the Haden Carrier Group, has won a £2.2m contract for mechanical and electrical services work on a new shopping complex planned for the centre of Milton Keynes.

This city centre project, for which the architects are the Milton Keynes Development Corporation with John Laing Construction as main contractors and Steensen, Warming and Malchay as consultants, is three-quarters of a mile long and a quarter of a mile wide.

Haden Young will provide mechanical and electrical services including air-conditioning, ventilation, hot and cold water, heating and fire prevention. Work on the site will start in September and is due to be completed by October 1977.

The company already is installing air conditioning, heating and hot and cold water services to a value of £300,000 in the first building to go up in the city centre development, a two-storey block comprising offices, shops and accommodation for service trades.

Elsewhere, Haden Young is busy on the new headquarters for Telephone Rentals at Bletchley, Bucks, where the company is providing a variety of services including air-conditioning and fire prevention, to a total value of £650,000.

## Power and lighting

THREE contracts together worth about £2m, have been awarded to Holiday Hall and Co. (Matthew Hall Group).

One, awarded by the Dartford Tunnel Joint Committee, and worth £900,000, is for the installation of power distribution cabling and electrical services for the new Dartford Tunnel.

The other two contracts are for work on the M1 motorway. One of these, worth £468,000, is for installation of a communications cable network between junctions 19 and 24 in Leicestershire, while the other, valued at £280,000, is for the lighting of about 12 miles of road. Two slip roads at junctions 12 and 14 are included.

About 600 lighting columns are called for and there will be a control system enabling the police to override the photo-electric control units in each column in the event of fog in daylight hours.

## Harbour job for Mears

WIDENING and deepening of the southern entrance to the Victoria and Upper docks at Aberdeen is to be carried out by Mears Construction.

The 50 kg unit is primarily intended for low-strength pelleted materials, where compression strength and deformation characteristics are of interest.

When the job is completed the entrance (through a lock) will be 44 metres wide, twice the present width. Deepening of the entrance will enable vessels to pass through at any state of the tide.

## Wimpey nets £3.5m. worth

ABERDEEN district office of George Wimpey and Company has just been awarded a contract valued at £2.2m. to build 200 married officers' and soldiers' quarters at Cameron Barracks, Inverness.

All but eight of the houses, which are designed by the Department of the Environment, will be built in No Fine concrete—the eight will be built in brick.

Site preparation work has already started and the contract is programmed for six weeks. This will bring the total number of married quarters built by the Edinburgh region of Wimpey for the Property Services Agency of the Department of the Environment to over 500 in the last eight years.

Redditch Development Corporation has awarded a contract worth £332,000 for the construction of 15 advanced factory units at Moons Moor, Redditch.

The factory units are to be in five blocks totalling 10,274 square metres of concrete flooring, built in single storey units with steel framing, brick dado and division walls.

## Absorbing machine vibration

STRUCTOPLAST SP 51 is a two part epoxy cold-casting grout, suitable for bedding heavy machinery on solid or framed structural foundations.

High compressive strength and good creep characteristics make it suitable for the support of heavy machinery producing both reciprocating and rotational forces where alignment must be maintained to very close tolerances.

Approved by Lloyd's Register of Shipping and Bureau Veritas for mounting auxiliary marine installations, SP 51 considerably reduces vibration transfer from machinery to foundation. A reduction in the overall maintenance is thus achieved.

Structoplast, Ford, Airdrie, Ford, Nr. Arundel, West Sussex, Littlehampton BN15 5ES.

## IN BRIEF

Anthony Masters and Associates, of Bristol, have been commissioned to design and supervise the construction of eight power stations in the United Arab Emirates.

A £1.7m. contract to build 107 flats, houses and maisonettes has been awarded by the London Borough of Hackney to Rush and Tompkins. Work starts on August 11.

Reed and Malik has been awarded a contract worth £583,000 by British Transport Docks Board for quay works at 30-31 berths at Southampton's Eastern Docks. Work entails construction of a pair of dolphins with a connecting diaphragm of steel sheet piling, a reinforced concrete linkspan platform supported on Rendex piles, the strengthening of an existing quay and protective fendering.

Factories on the Castleham Estate, Hastings, Sussex, for Hastings Borough Council (£351,296), a children's home at Hastings for East Sussex County Council (£256,033) and a two-storey building with a link to an existing factory for Buse Farm Fresh Foods, again at Hastings (£68,911), are to be constructed by W. H. Wood.

## £6½m. work by Fairclough

TO-DAY, a £4m. stretch of year-old Mr. Leonard Fairclough, undertook the Manchester opening ceremony, has won just under £2m. worth of work for the Thames Water Authority for the construction of reinforced concrete storm tanks and pipe-work at Acton in West London and for the Lee Valley company for a water tower at Sundon Park, Luton.

The Thames Authority job will require three years to complete in three phases. The Luton job will take 64 weeks to finish and involve the provision of pre-cast panels for the tank bowl.

## £3m. awards to Clarke Group

CONTRACTS totalling £3m. have been won by S. W. Clarke (Contractors), construction subsidiary of the Clarke Group.

One, valued at £200,000, is for a school at Burton-on-Trent for Staffordshire County Council, others, both for Sandwell Metropolitan Borough, are for £350,000 worth of housing at Oldbury, near West Bromwich and for CLASP extension and alterations costing £150,000 to Darlington High School, West Bromwich.

## Historical facade to be restored

THE FACADE of a 200-year-old building at 30 Coleman Street—believed to be one of the oldest streets in the City of London—is to be fully restored to its original appearance by Trollope and Colls as part of a wider ranging contract worth about £820,000.

Work is to start shortly and the architects and design consultants are Wells-Thorne and Partners. Considerable renovations and

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## Lower cost of air conditioning

BAHCO company is bringing on to the U.K. market its new variable air volume (VAV) terminal unit for air conditioning systems.

Recent independent tests have shown that both running and cooling costs are lower using a VAV system than any other. Lower total air flow, smaller primary unit and distribution ductwork mean that heating and cooling equipment of less capacity can be installed. Reheating after-coolers, together with their associated pipework can usually be dispensed with. Cheaper running costs are achieved because the total air flow to be heated and cooled is less than in other systems.

The units are available in seven sizes.

The air quantity may be continually varied to 40 per cent of design volume. The regulator is activated by a pneumatic motor, the minimum of site labour command of a room thermostat, space but at the same time has a high degree of flexibility. A with an electric motor. In the variety of finishes is available BAHCO VAV terminal units, all types of single storey domestic dwellings, offices, hospitals and similar purposes.

Guideway will start work soon Banbury OX16 7TB. Banbury on the 250 units which make up 57461.

## Emergency homes in Tehran

A CONTRACT worth over £12m. for three-room accommodation units has been won by Guideway of Guildford, Surrey.

The houses will be built south of Tehran as part of a large emergency housing project, and Guideway will use its recently introduced system of Basic Accommodation which is designed specifically for use in developing countries. It employs the minimum of site labour command of a room thermostat, space but at the same time has a high degree of flexibility. A with an electric motor. In the variety of finishes is available BAHCO VAV terminal units, all types of single storey domestic dwellings, offices, hospitals and similar purposes.

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# The union that steeled itself to crisis

BY LORELIES OLSLAGER



ANY DAY this week, the government is expected to announce its decision on whether the British Steel Corporation will be allowed to close a number of steel works in Scotland and Wales over the coming years as part of its long-term development and modernisation programme.

If permission is given, particularly for an end to steel-making at the Shotton plant in North Wales which alone could lead to the loss of some 6,000 jobs by 1981, there could well be large-scale demonstrations of discontent that will also be fuelled by last week's agreement between BSC and the trade unions on a reduction of labour costs in the present cyclical recession.

Union leaders agreed to the deal, which foresees the dismissal of several thousand men and drastic cuts in the earnings of numerous others, because over the past few months they have been genuinely convinced of the industry's plight and want to secure its survival.

But discontent among the rank and file is not just the machinery of a few political radicals. Many of the 135,000 or so manual workers employed in BSC's steel plants are being asked to make considerable sacrifices now for what at best can be uncertain future gains.

**New policy**

The steel workers are the first labour force in a nationalised industry to have to face up to the full consequences of the recession and the new economic policy on public expenditure pursued by the Government. The Corporation is not only suffering from the present economic recession, but

any day this week, the government is expected to announce its decision on whether the British Steel Corporation will be allowed to close a number of steel works in Scotland and Wales over the coming years as part of its long-term development and modernisation programme.

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## Letters to the Editor

**Protect the consumer**

From Mr. H. Lind

Sir—The Secretary for Trade has forbidden the low-price Sky-train transatlantic service because "it would divert traffic away from the existing services."

Will any of the proliferating bodies which have been established, allegedly to protect the economic interests of the consumer, step in to attack those who have created this barrier to the entry of low-price competitors? If not, does one detect a whiff of hypocrisy in the corridors of power?

Harold Lind,  
15, Nelson Terrace, N.I.

**Shotton steel**

From The Deputy Chairman, The Wales Council

Sir—As a life long trade unionist and member of the Labour Party, may I urge the Government not to give way to the British Steel proposal to close steel-making at Shotton. I had the privilege for very many years to be a union leader in this area and looked after the interests of the majority of the men at the Shotton works. It has an enviable record of labour relations, hardly any strikes in its 50 years of existence, and a working force which is second to none in my experience.

It is an extraordinary situation when the Government, trade unions, the Confederation of British Industry and everyone is crying out for productivity, for no strikes and for good labour relations, that there is a serious proposal to axe the works that has all these attributes and yet, British Steel proposes to invest heavily in areas which have had records of strikes and consequently big losses.

The consequences of closing steel in this small community of Shotton would be disastrous not only to the area, but to North Wales as a whole—at the last count this area had the highest unemployment figures in the whole of England, Scotland and Wales—but also on Merseyside: it is quite unfair that the amount of investment is going to areas and ports nearest the Common Market.

I urge the Government not to treat Shotton as a sacrificial lamb and to see the justice of the points made in the case for Shotton which was illustrated in your newspaper of July 31.

Tom Jones,  
Rhoslan, 7, King George Street, Shotton, Deeside, Clwyd.

**Ping-pong pensions**

From Mr. B. Cullingford

Sir—So Mr. Foot, despite all warnings, has included pensions in his anti-inflation package. The bemused worker who is nearing retirement must be wailing, "Me? Again?" During the last 20 years when pensions have been used for political ping-pong it is that same worker who has suffered the most. Now through Mr. Foot's myopic mismanagement, it is he again who will suffer the more disastrous of its effects.

As Mr. E. D. Cresswell explained (July 31) the penalties which the restrictions will impose on the near-retired are long term. They are indeed. While everyone is being asked to take a cut in real income during a limited period, the man who retires during the freeze will have

**Suspicion**

The immediate suspicion voiced when BSC chairman Sir Monty Finniston called for some 30,000 redundancies this year was that he was trying to bring forward the closure programme, large parts of which the Government has just instructed BSC to postpone for several years. (It is the decision on the rest of the programme that will be announced this week.)

This suspicion no doubt strengthened the unions' initial "no" to any redundancies other than voluntary and mutually agreed cutbacks. Mr.

**Strikes**

It was this provision which first led to trouble, because the Iron and Steel Trades Confederation claimed that local BSC management was overstepping the mark when trying to eliminate all week-end work, always by far the best paid in the shift system. There were short-lived strikes at a number of plants, and BSC was obliged to concede that at least some week-ends could be worked for the time being.

The ISTC managed to extract this concession in June, at the same time that the Corporation first informed the unions that the six-point plan was not of the situation.

Traditionally a conservative union, with a tradition of co-operating with management and settling disputes through negotiations and conciliation, the ISTC completely dominates

**Regulations for drivers**

From Mr. D. Denby

Sir—We read that the Minister for Transport told the House of Commons that he is to acquaint the EEC Commission with the difficulties faced by the U.K. transport industry over the implementation of the Common Market drivers' regulations on January 1 next. The three principal ones are: (a) installation of tachographs in new vehicles; (b) limitation of driving distance to 281 miles per shift; (c) reduction of maximum time behind the wheel from ten hours to eight.

It is stated that the regulation has been operated by the original "Six" since 1971. This is not strictly true. In France, for instance, tachographs became compulsory on January 1, 1975, for new vehicles only and still are not required by non-French vehicles on a temporary visit. In France again, the eight hours driving limit is combined with a 50 m.p.h. speed limit when laden and 55 m.p.h. when empty—a very different proposition from our 40 m.p.h. limit.

British speed limit enforcement to-day is patchy where the lorry is not exceeding the present motor-car limit. Our lorry speed limits need to be reviewed in conjunction with any hours reduction.

Finally, it should be borne in mind that the U.K. like Italy carries 85 per cent. of its freight by road, vastly more than Germany, France and Benelux. It follows that restrictive laws for haulage in the Nine will hit the U.K. disproportionately.

Dick Denby,  
Denby Transport,  
Moorland Way, Lincoln.

**Floating rates**

From G. Choudhury-Best

Sir—I agree with Henry Meulen (July 30) about credit-squeezes, but I am sorry to say I do not follow him on the supposed beneficial effects of completely free floating.

A study of Special Tables C and D in the UN Monthly Bulletin of Statistics for June fails to confirm that any beneficial effects have followed the floating of the pound in June 1975. Indeed devaluation in 1967. It is open to Mr. Meulen to argue that these measures may have averted even greater catastrophe, but in view of the fact that the Saudi Arabian Minister stated the other day that our export prices were still too high.

I think it is necessary seriously to examine the possibility that free floating far from automatically correcting imbalances in trade, actually exacerbates them in that large firms particularly, as distinct from smaller entrepreneurs, will actually tend to raise their export prices as a hedge against a possible further fall in the value of the pound later. The U.K.'s position certainly seems to be unique among the industrialised countries of the world, whereas in 1960 we were exporting \$8,720m. worth of manufactured goods, exceeded only by West Germany and the U.S. in 1973 we exported \$25,630m. and had been overtaken by France and Japan. This was about a threefold increase, but in all the EEC and EFTA countries including Italy the increase was of the order of five or sixfold; and other developed market economies including Japan had a ninefold increase.

These facts are sufficiently well known: but if one takes the unit value increase (table D) the minister fact emerges that only was the U.K. figure for 1973 (the last complete year available) lowest of all the EEC countries except Italy and lower than all the EFTA countries and Japan, but for the third quarter of 1974 the U.K. had actually slipped below Italy and was much less above the U.S. and Canada than previously.

In my view the undeniable benefits of free floating have to be balanced carefully against those of having an exchange rate which is relatively fixed for the foreseeable future and which is securely based on a valuable commodity such as gold. We must also stop discouraging the entrepreneur as against the "safe" established business, which all too often turns out to be far from safe when the crunch comes. In this connection the Surrey

**Imports and exports**

From Mr. J. Page

From Mr. O. Henderson where Mr. Henry Meulen (July 30) has been living these last few years. His comments are exactly the opposite of this country's experience. So far from floating exchange rates compelling us to import less, they have simply allowed organised labour (car workers, coal miners) to demand higher wages. The cost of British products has risen correspondingly, and it is clear that our price and delivery are in many cases uncompetitive both at home and abroad.

Uncertainty causes importers to charge 5-10 per cent. more than necessary to cover the exchange risk. Exporters must do the same, otherwise they lose out if they quote in pounds because they can buy less imported raw materials with the proceeds. Imports and exports are thus priced higher than they would be if exchange rates were definite.

Those of us in foreign trade require stable exchange rates, which can only be achieved by drastically reducing inflation. One must support the Government's belated and timid efforts to this end.

I. A. Page,  
Pigeon Hood,  
9, Coombe Road,  
Kingston-upon-Thames, Surrey.

**Buying British or free trade**

From Mr. W. S. Howe

Sir—As one who is concerned with trying to teach the principles of sound and rational economic analysis to those who wish to follow a career in business I totally deplore the recent comments by the Secretary for Trade, Mr. Peter Shore, calling upon those who buy foreign cars to "search their consciences" before so doing.

Both the fundamental economic and wider social morality of the approach of Mr. Shore are very much open to question. It is surely a major basis of free international trade that businesses and private individuals buy from that country which will give them the greatest value for money. From this follows the specialisation by different countries according to comparative advantage and efficiency. To seek to prevent such activity on the part of such persons must surely lead to lower economic efficiency and restricted personal freedom in economic choice.

Mr. Shore appears to be trying to attach some kind of social

the BSC trade unions. Only the craftsmen have a separate weight to pull, but their attitudes are very similar to those of the ISTC.

**Results**

Of the ISTC's 105,000 members, ranging from labourers to white collar staff, some 65,000 are employed in BSC. Among the other unions, only the Blastfurnacemen operate exclusively in the steel industry, with 13,500 members in BSC. None of the general workers' unions has got a strong foothold in the Corporation.

The ISTC has just got a new general secretary, Mr. Bill Sims, much less conservative than its autocratic leader for years, Sir David Davies. But it remains highly concerned about the prosperity of the industry and willing to co-operate if it feels that prosperity is threatened.

At the crisis meeting last Tuesday, which lasted for more than 13 hours, BSC explained to the unions once more that the six-point plan had not produced the desired results and that savings were running at an annual rate of £50 to £60m., well short of the target £100m.

It told the unions bluntly that if they were not willing to co-operate, then unilateral cost saving measures would be introduced. The threat carried considerably more weight this time than in the spring. The Government has made it clear that it is no longer prepared to bail out the nationalised industries, now ought to be replaced as soon as the economy picks up again—something BSC is not at all prepared to concede, Mr. Sims also knows that there will be resistance among local union officials and the rank and file.

It was the workers' refusal to co-operate at local level that helped the Corporation during the past to upset the six-point plan—and 24 months, in addition to volun-

**On the dole**

In return for a less drastic dismissal programme, the unions had to concede management the possibility of "waiving" the guaranteed working week at individual plants after consultations with local union representatives. This means that workers for whom there is temporarily no work will be on the dole instead of being paid by the Corporation.

But quite apart from the social arguments against unemployment, Mr. Sims believes that BSC will be unable to profit fully from the next cyclical upswing if its labour force is not kept largely intact. In the union's view, therefore, the men who are being made redundant now ought to be replaced as soon as the economy picks up again—something BSC is not at all prepared to concede, Mr. Sims also knows that there will be resistance among local union officials and the rank and file.

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**Closure**

But a test of even greater magnitude for Mr. Sims and the ISTC's traditional philosophy may come over the final decision on the closure programme, particularly over Shotton.

The situation is bedevilled by antagonisms between the union at Shotton, prepared to fight hard for the retention of a major steel making capacity, and the membership at Port Talbot who have been told that their works can only be expanded at the expense of Shotton.

In addition to being accused of helping BSC to run down the industry's labour force, Mr. Sims may find himself in the middle of fraternal warfare among his members. "I am sorry for the man," a BSC official commented in a face mixed metaphor, "his job is like trying to ride a tiger between Scylla and Charybdis."

**GENERAL**

Figures of U.K. sterling, gold and convertible currency holdings (July).

Capital issues and redemptions (July) published.

Royal National Eisteddfod opens, Cricethel, North Wales.

**PARLIAMENTARY BUSINESS**

House of Commons: Consideration of Lords amendments to Social Security Pensions Bill, Child Benefit Bill and Housing Finance (Special Provisions) Bill.

House of Lords: Consideration of Commons amendments to Lotteries Bill. Second reading of Community Land Bill.

## To-day's Events

**BALLET**

New London Ballet, led by Galina Samsova. In Pas de Deux from Le Corsaire, Washington Square, and Laurencia, Sadler's Wells Theatre, London, 7.30 p.m.

**MUSIC**

D'Oyly Carte Opera Company in Yeomen of the Guard, part of centenary season of Gilbert and Sullivan, Royal Festival Hall, London, 7.30 p.m.

**SPORT**

Cricket: Second Test, England v. Australia, Lords.

Yachting: Charles F. W. Week-Admiral's Cup race.

Tennis: Inter-Services championships, Wimbledon.

**COMPANY RESULTS**

Clive Discount Holdings (full year).

Leirasnet International (full year).

**COMPANY MEETINGS**

See Week's Financial Diary on page 4.

**OPERA**

Enslin National Opera production of The Magic Flute, conductor Charles Mackerras, Coliseum Theatre, London, 7.30 p.m.

**HOUSE OF LORDS**

Consideration of Commons amendments to Lotteries Bill. Second reading of Community Land Bill.

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## The 1976 National Management Game

### An opportunity to put your management skills to the test and win £500

The National Management Game is now firmly established. During the six years in which the event has taken place over 26,000 contestants have participated. It is widely acknowledged to provide useful training in management, putting people into a boardroom situation, where they work together to thrash out balanced decisions within a time limit, and under pressure of competition.

In the Game, specific and detailed business situations with their attendant problems, risks and consequences, are simulated with the help of a computer. Each team in the Game is, in effect, a company making decisions on the employment of its resources, in manufacturing and marketing a product over a number of trading periods in competition with other teams in groups. The winner is the team in each group generating the largest net profit. Initially a team may be composed of any number of individuals but teams in the final round are limited to six people each.

The National Management Game is sponsored by The Financial Times, International Computers Limited, and the Institute of Chartered Accountants in England and Wales, in association with The Institute of Directors and The Confederation of British Industry.

Teams taking part in previous Games have largely come from industry and commerce, accountants and consultants, banks and building societies, insurance companies, colleges and business schools, chambers of commerce, nationalised industries, and central and local government.

The entry fee is £40 (including VAT) per team and there is no limit to the number of teams entering from one organisation.

The first round begins in January and the competition is run on a knock-out basis over five rounds. The four most successful teams will compete in the finals in London in July 1976.

The winning team will receive £500 and will compete against teams from other countries in the European Management Game finals in Dublin.

**The 1976 National Management Game**

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




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
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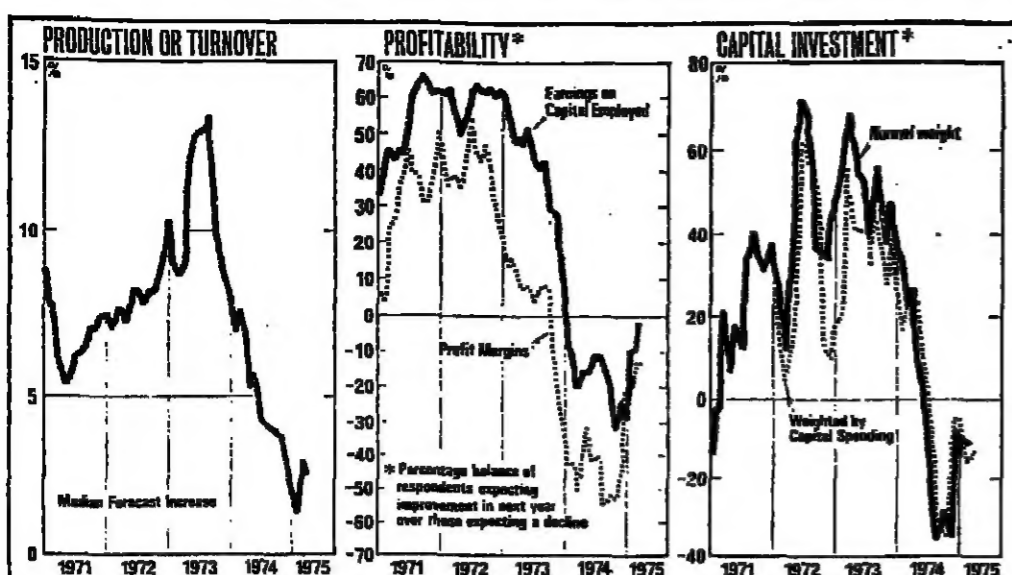








## FT Monthly Survey of Business Opinion



## Pay policy has failed to boost confidence

THE GOVERNMENT'S new pay policy is generally expected to bring about some moderation in the rate of wage inflation, though possibly not to the extent Ministers are hoping. But it has so far failed to dispel industry's mood of pessimism about the general business situation.

This is brought out by the latest Financial Times monthly survey of business opinion which covered companies in building and construction, food and tobacco, and the textile and clothing industries.

The lack of confidence is based in part on scepticism about the effectiveness of the Government's "voluntary" pay measures and partly on the prospect of a recession, especially in the construction and textile/clothing sectors. Output is expected to go on falling for at least another 12 months, despite the high hopes still held for export sales. Food companies and retailers say that there are increasing signs of price resistance and of trading down.

Further increases in unemployment are unavoidable. Nearly half the companies interviewed for the all-industry sample during the last four months expect to use less manpower in the coming 12 months. The outlook for capital expenditure is similarly discouraging, especially in terms of volume.

One consequence is that rather fewer companies now expect to have to resort to outside sources of finance. The outlook for a recovery in profitability continues to improve, particularly in relation to earnings on capital employed. The balance of expected "ups" is now almost in balance with the "downs," although if the change in money values were allowed for, the balance would still be substantially negative.

### EARNINGS ON CAPITAL

Those expecting earnings during current year to:	4 monthly moving total				July 1975			
	Apr.-July	Mar.-June	Feb.-May	Jan.-Apr.	Apr.-July	Mar.-June	Feb.-May	Jan.-Apr.
Improve	33	30	31	23	62	41	5	5
Remain the same	28	27	24	22	14	29	9	9
Contract	35	39	41	52	24	30	86	86
No comment	4	4	4	3	—	—	—	—

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### Weather

**U.K. TO-DAY**  
SUNNY dry and somewhat warm, but Western areas will be cloudy with scattered showers. London, S.E. and Southern England, E. Anglia, E. Midlands Dry, sunny periods. Wind S.E. light. Max. 30C (86F).  
Northern and N.E. England, W. Midlands, North Wales, Lakes Dry with sunny periods and light southerly wind. Max. 28C (82F).  
Isle of Man, Borders, Edinburgh, Dundee, Aberdeen, N. Ireland, S.W. Scotland Dry with sunny spells and light southerly wind. Isolated showers in Ulster later. Max. 27C (81F).  
Channel Isles, S.W. England, S. Wales Bright intervals and occasional showers. Max. 28C (78F).  
Central Highlands, Argyll Sunny intervals, dry. Wind S.W. light or moderate. Max. 23C (73F).  
North Scotland, Orkney and Shetland Rather cloudy with occasional drizzle. Wind S.W. moderate or fresh. Max. 16C (59F).  
Outlooks: Very warm with bundy outbreaks in the South-West spreading slowly north. Dry still in the East.  
Lighting-up: London 21.15, Manchester 21.32, Glasgow 21.50, Belfast 21.52.

## Sperry Rand stops making editing typewriters

BY ROY LEVINE

SPERRY RAND Corporation has withdrawn from an important sector of the office equipment market.

Mr. Joe Miller, European general manager of Sperry Remington Office Systems and Machines Division, confirmed that the corporation had ceased production of its editing typewriters after less than two years. Present stocks are being sold in the U.S. at discounts of up to 50 per cent.

At its simplest an editing system is a fast, duty type writer linked to an electronic console that captures the typed text on to magnetic tape. The text can then be edited or reproduced at will at speeds of up to 300 words per minute. This allows a secretary to at least double her output.

The market for editing typewriters is expected to grow rapidly both in the U.S. and Europe. Turnover by the end of the decade has been estimated at over \$800m. in the U.S. and about another \$200m. in Europe.

Mr. Miller refused to give the extent of the losses on the product, which is made at its plant in Marietta, Ohio. The corporation first entered the market in the early 1970s by selling systems made by Redactor Corporation under its own name. Under a royalty agreement with Redactor it then started to manufacture identical products in 1973.

The reason production had not been profitable, according to Mr. Miller, was that the typewriter around which the system had been built was bought from IBM, which did not give quantity discounts, thus squeezing margins.

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## Peers seek to amend Industry Bill

BY JOHN HUNT

THE GOVERNMENT faces the prospect of more setbacks in its marathon battle over the Industry Bill this week when Conservative peers attempt further amendments to the legislation.

It has already suffered seven defeats on the Bill in the Lords and the list is likely to lengthen during the Lords report stage to-morrow and Wednesday when Liberals are expected to join Conservatives in pressing for more changes.

It is possible that the Third Reading in the Upper House, due to take place on Wednesday, will have to be postponed until the overspill period in September or October.

Mr. Eric Varley, the Industry Secretary, remains determined to reverse any major amendments forced on the Government by the peers. When the Bill returns to the Commons in October he is prepared to introduce a guillotine timetable to get it on to the statute book.

An amendment to be pressed by Tory peers this week will seek to ensure that information from a company is passed on to all of its employees—not just trade unionists.

They will also seek to introduce an impartial tribunal which will have the final say when a company appeals against a Government order requiring it to give information to trade unions. As the Bill stands at the moment, this function is carried out by an advisory committee with the Secretary for Industry making the final decision, subject to Parliamentary control.

There will be an attempt to change the section which states that one of the functions of the National Enterprise Board should be the promotion of industrial democracy in undertakings which it controls. An amendment proposes that this function should be limited to the promotion of good industrial relations.

Changes already approved by the Lords prevent the NEB from extending public ownership into profitable areas of manufacturing industry and bar it from establishing industrial undertakings of its own in competition with private industry. These strikes at the very root of the Bill as it was originally conceived.

### Extended protection

Another amendment has modified the section which allows the Secretary of State to refuse to pass information to a union where it would cause substantial injury to the undertaking concerned. The Conservatives cut out the word "substantial," thus allowing the protection to be extended to companies which suffered any injury, however small.

As the result of another change, Government stock cannot be given in compensation to shareholders in companies taken over by the NEB under a vesting order. The compensation would have to be paid in cash.

The Liberals, with Conservative support, have passed an amendment reducing the role of the NEB in providing, maintaining or safeguarding employment. This means that the

## Nigeria reopens its frontiers

BY OUR OWN CORRESPONDENT

LAGOS, Aug. 2

NIGERIA has reopened its international airports and land frontiers which were closed on Tuesday, following the military overthrow of General Yakubu Gowon, the former Head of State.

The first incoming flight brought a number of the deposed Government leaders, including Major-General David Ejoor, former Army Chief of Staff, as well as top Federal Government officials including those on the Nigerian delegation to the OAU summit meeting in Kampala, Uganda.

Seven British journalists, however, were barred from entering Nigeria. A police spokesman said the journalists had no entry permits when they arrived at Lagos airport yesterday.

Scores of Nigerians, among them senior civil servants, top military officers of the ousted Gowon Government as well as those of the new Government, returned to the country yesterday.

The former State military Governors were handed their letters of retirement at a televised ceremony here yesterday.

Meanwhile, newspapers in Nigeria have welcomed the change of government while calling for more dynamic and progressive rule. Special prayers were said in churches here for a successful government.

ERIDGET BLOOM writes: While the calm which characterised the first few days of the new Nigerian regime is continuing, Nigerians are still awaiting news of the full composition of Brigadier Mohammed's government.

The same day the Supreme Military Council—all military or police—were announced on Wednesday but members of the two Federal Government organs, the Federal Executive Council and the New Council of State have yet to be appointed as have the Cabinets of the new State governors.

## Varley statement on foundries aid

BY KENNETH GOODING, INDUSTRIAL CORRESPONDENT

DETAILS OF Government financial aid for two vital sectors of U.K. industry—the foundries and the machine tool industry—were given to Parliament by Mr. Eric Varley, Industry Secretary, early this week.

The State cash will be offered as part of the arrangements promised in his Budget speech by the Chancellor, Mr. Denis Healey, when he said £50m. would be made available for modernising important parts of U.K. industry.

It is known that the iron-founders have told the Government they need at least £63m. over seven years if any scheme to promote modernisation and rationalisation is to have a chance of success.

The foundry industry's shortcomings were particularly noticeable during the last economic boom when shortages of castings provided one of the major bottlenecks and constraints on engineering output.

As a result, exports were lost and imports encouraged. As Mr. Healey pointed out in his speech, the foundry industry is a supplier to many other industries and its health is important to the health of the engineering industry as a whole.

The machine tool manufacturers are apparently not enthusiastic about what they have been told so far of the proposed aid scheme for their industry.

The scheme, in this case devised by the Department of Industry rather than the industry itself, will put the emphasis on product development and investment rather than on the counter-cyclical programmes for which the machine tool makers have been pressing. The industry has been assured that the door has not been closed on a counter-cyclical programme and that one could be introduced at some later date.

The machine tool industry is at present deep in recession. Not many companies are working at more than 60 per cent. of capacity and many are producing at below half the possible rate of output.

The home market order situation is as bleak as anyone in the industry can remember for 20 years, and one major company did not receive one order from a U.K. customer last month. It is only because export markets have held up fairly well that the industry has been able to keep producing even at today's reduced rate.

The sharp downturn has come so quickly after the last "trough" in the demand cycle that it has put many investment projects at risk and the State aid scheme is apparently designed to make sure they will not be shelved or dropped.

## Crown Agents expected to receive more State cash

BY NICHOLAS LESLIE

A FURTHER injection of funds by the Government into the Crown Agents, the semi-governmental agency which acts for Commonwealth countries, is expected so that the Crown Agents may meet heavy losses incurred in property and secondary banking investment.

The Government has already provided £85m. of extra capital, but it has always been clear that this was unlikely to be sufficient to meet the ultimate total of Crown Agents' losses.

The sum was provided after a preliminary report by accountants Coopers and Lybrand, commissioned by Mr. John Cuckney, who was put in to sort out Crown Agents' problems. A further and more detailed report will shortly be presented by Coopers and it is likely that provision will be made for Crown Agents' reserves will total some £100m. when its audited accounts for 1974—together with a belated audit for 1973—is published around the end of the month.

### THE LEX COLUMN

## When dividends do not matter

Dividend controls depress share prices, but share prices are not necessarily controlled by dividends. This distinction is important at a time when equity issues are seen by the authorities as a justification for special dividend concessions. For the evidence suggests that finance directors who become preoccupied with their company's dividend policies are probably wasting their time.

One of the few inconclusive areas of the Diamond report on the "Income from Companies and its Distribution" lay in its discussion of the relationship between dividends and share prices. The commission received a good deal of evidence to suggest that an increase in a company's dividend payment, although matched by an opposite effect on its retention, would raise the share price. It was hastily concluded that the whole question was "rather more complex than some witnesses suggested to us." But it should be possible to take the argument further than this.

At the same time Diamond was careful to stress that when discussing the uncertain effect of changes in dividend payments on share prices, the report was only dealing with the price of particular shares relative to others at the same market level. The impact of a dividend change on an individual company's share price is one thing—and that of changing expectations about the future returns on equity investment generally is quite another.

A low yield may be acceptable when a growth situation is deliberately reinvesting a high proportion of its earnings, but not when there is no prospect of it ever being able to pass on the returns from those investments. Maybe the most depressing feature about dividend controls is the thought that since they cannot be defended logically, there is no logical reason why they should ever be removed.

### Newman Industries

The Newman Industries affair has now reached a wholly unsatisfactory stage. Last week's meeting passed a resolution approving the group's purchase of certain investments from Thomas Poole and Gladstone; the two companies have a common chairman and deputy chairman, Mr. A. Bartlett and Mr. J. K. Laughton. The vote was taken despite the fact that an independent report by Schroders was not ready, and in the face of strong opposition from the Prudential. Meanwhile, another resolution approving the purchase by Newman of shares in TPG from a private company owned by Messrs Bartlett and Laughton was not put before the meeting.

The current position is that the Prudential intends to continue its opposition and that a decision will apparently be made early this week about what future role Schroders will play. The bank clearly sees itself as an adviser to Newman shareholders as a whole. The main positive step which should be taken now is the publication as soon as possible of the full report covering both deals. A key influence could be the Stock Exchange, which has played an ambiguous role so far by passing (mainly by means of takeovers) did typically tend to pay somewhat higher dividends than average, but the differences were only slight.

### Precondition

When it comes to the role played by dividends in fund raising, a study commissioned by Diamond found it impossible to examine whether a high dividend tended to be a precondition of a successful equity issue. It suggested that companies growing most rapidly by equity issues (mainly by means of takeovers) did typically tend to pay somewhat higher dividends than average, but the differences were only slight.

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